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Freeman

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(54) **VERIFICATION OF SOFTWARE AGENTS
 AND AGENT ACTIVITIES**

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(57) **ABSTRACT**

The present invention provides for verification of software
 agents and their activities. In a distributed computing
 environment, an origin resource, a destination resource and
 a trusted resource are provided. The origin resource is
 associated with a software agent in that, most generally, the
 agent's information and/or an entrusted task are relevant to
 the origin resource. The destination resource is associated
 with the software agent in that, most generally, it is expected
 to advance the agent in the performance of an entrusted task.
 The trusted resource is associated with the software agent in
 that the trusted resource functions to provide verification of
 the software agent and its activities. The trusted resource
 preferably supports one or more selected operations such as,
 for example: receiving/forwarding of software agents;
 encrypting/decrypting software agents; acquiring, storing,
 retrieving and comparing of software agent fingerprints;
 executing TR rules that indicate the appropriateness of the
 interaction with the destination resource; establishing,
 setting, updating and checking return timers; generating and
 forwarding verification return relevant to verification of the
 agent and its activities; logging the activities of software
 agents with which the trusted resource interacts; and
 stripping, masking, or otherwise protecting part(s) or all of
 a software agent, particularly the TR rules.

20 Claims, 4 Drawing Sheets

